

ABSTRACT

A process for the production of an amide comprising: (a) reacting R_1 -CX and oxygen to form R_1 -COOH, wherein the reacting occurs in the liquid or vapor phase and in the presence of a first catalyst, wherein X is a group that leaves upon oxidation, and wherein R_1 is phenyl, which is unsubstituted or substituted by one or more identical or different radicals selected from (C_1 - C_{12})-alkyl, (C_1 - C_{12})-alkoxy, (C_1 - C_{12})-alkanoyloxy, (C_1 - C_{12})-alkanoyl, amino, hydroxyl, $-CH_2-O-(C_1-C_{12})$ -alkyl, $-NH-(C_1-C_{12})$ -alkyl, $-NH-CO-(C_1-C_{12})$ -alkyl, or $-S-(C_1-C_{12})$ -alkyl; (b) separating the R_1 -COOH from the mixture formed in step (a), wherein the R_1 -COOH is maintained in a liquid or vapor phase; and (c) reacting the R_1 -COOH maintained in the liquid or vapor phase from step (b) with an amine to form an amide, wherein the reacting occurs in the vapor phase and in the presence of a second catalyst.